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EXAMINER

LOVEL, KIMBERLY M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/666,601	Applicant(s) LOBO ET AL.	
	Examiner Kimberly Lovel	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 12-38 and 47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 12-38 and 47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-4, 12-38 and 47 are rejected. Claims 5-11 and 39-46 have been canceled.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 30 October 2007 has been entered.

Affidavit

Declaration under 37 C.F.R. § 1.131

3. The affidavit filed on 19 April 2007 under 37 CFR § 1.131 has been considered but is ineffective to overcome the **Rappold** reference (US PGPub 2004/0117397).

Formal Requirements of a Declaration

4. From MPEP § 715.04[R-2]:

The following parties may make an affidavit or declaration under 37 CFR § 1.131:

- (A) All the inventors of the subject matter claimed.
- (B) An affidavit or declaration by less than all named inventors of an application is accepted where it is shown that less than all named inventors of an application invented the subject

matter of the claim or claims under rejection. For example, one of two joint inventors is accepted where it is shown that one of the joint inventors is the sole inventor of the claim or claims under rejection.

(C) **> If a petition under 37 CFR § 1.47 was granted or the application was accepted under 37 CFR § 1.42 or 1.43, the affidavit or declaration may be signed by the 37 CFR § 1.47 applicant or the legal representative, where appropriate.< .

(D) The assignee or other party in interest when it is not possible to produce the affidavit or declaration of the inventor. *Ex parte Foster*, 1903 C.D. 213, 105 O.G. 261 (Comm'r Pat. 1903).

Affidavits or declarations to overcome a rejection of a claim or claims must be made by the inventor or inventors of the subject matter of the rejected claim(s), a party qualified under 37 CFR §§ 1.42, 1.43, or 1.47, or the assignee or other party in interest when it is not possible to produce the affidavit or declaration of the inventor(s). Thus, where all of the named inventors of a pending application are not inventors of every claim of the application, any affidavit under 37 CFR § 1.131 could be signed by only the inventor(s) of the subject matter of the rejected claims. Further, where it is shown that a joint inventor is deceased, refuses to sign, or is otherwise unavailable, the signatures of the remaining joint inventors are sufficient. However, the affidavit or declaration, even though signed by fewer than all the joint inventors, must show completion of the invention by all of the joint inventors of the subject matter of the claim(s) under rejection. *In re Carlson*, 79 F.2d 900, 27 USPQ 400 (CCPA 1935).

An affidavit is a statement in writing made under oath before a notary public, magistrate, or officer authorized to administer oaths. See MPEP § 604 through § 604.06 for additional information regarding formal requirements of affidavits. 37 CFR § 1.68 permits a declaration to be used instead of an affidavit. The declaration must include an acknowledgment by the declarant that willful false statements and the like are punishable by fine or

imprisonment, or both (18 U.S.C. § 1001) and may jeopardize the validity of the application or any patent issuing thereon. The declarant must set forth in the body of the declaration that all statements made of the declarant's own knowledge are true and that all statements made on information and belief are believed to be true.

5. From MPEP 602 (II):

U.S. Patent and Trademark Office personnel are authorized to accept a statutory declaration under 28 U.S.C. § 1746 filed in the U.S. Patent and Trademark Office in lieu of an "oath" or declaration under 35 U.S.C. § 25 and 37 CFR § 1.68, provided that the statutory declaration otherwise complies with the requirements of law. Section 1746 of Title 28 of the United States Code provides:

Whenever, under any law of the United States or under any rule, regulation, order, or requirement made pursuant to law, any matter is required to be supported, evidenced, established, or proved by sworn declaration, verification, certificate, statement, oath or affidavit, in writing of the person making the same (other than a deposition, or an oath of office, or an oath required to be taken before a specified official other than notary public), such matter may, with like force and effect, be supported, evidenced, established, or proved by the unsworn declaration, certificate, verification, or statement, in writing of such person which is subscribed by him, as true under penalty of perjury, and dated, in substantially the following form:

[1] If executed without the United States:

"I declare (or certify, verify, or state) under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on (date).

(Signature)."

[2] If executed within the United States its territories, possessions, or commonwealths:

"I declare (or certify, verify, or state) under penalty of perjury that the foregoing is true and correct. Executed on (date).
(Signature)."

6. The submitted declaration meets the formal requirements for submission of a declaration under 37 C.F.R. §1.131.

Allegation of FACTS

7. MPEP § 715.07 (I) states, *inter alia*,

The essential thing to be shown under 37 CFR § 1.131 is priority of invention and this may be done by any satisfactory evidence of the fact. FACTS, not conclusions, must be alleged. Evidence in the form of exhibits may accompany the affidavit or declaration. Each exhibit relied upon should be specifically referred to in the affidavit or declaration, in terms of what it is relied upon to show.

A general allegation that the invention was completed prior to the date of the reference is not sufficient. *Ex parte Saunders*, 1883 C.D. 23, 23 O.G. 1224 (Comm'r Pat. 1883). Similarly, a declaration by the inventor to the effect that his or her invention was conceived or reduced to practice prior to the reference date, without a statement of facts demonstrating the correctness of this conclusion, is insufficient to satisfy 37 CFR § 1.131.

The affidavit or declaration and exhibits must clearly explain which facts or data applicant is relying on to show completion of his or her invention prior to the particular date. Vague and general statements in broad terms about what the exhibits describe along

with a general assertion that the exhibits describe a reduction to practice "amounts essentially to mere pleading, unsupported by proof or a showing of facts" and, thus, does not satisfy the requirements of 37 CFR § 1.131(b). *In re Borkowski*, 505 F.2d 713, 184 USPQ 29 (CCPA 1974). Applicant must give a clear explanation of the exhibits pointing out exactly what facts are established and relied on by applicant. 505 F.2d at 718-19, 184 USPQ at 33. See also *In re Harry*, 333 F.2d 920, 142 USPQ 164 (CCPA 1964) (Affidavit "asserts that facts exist but does not tell what they are or when the occurred.").

8. In the case of the instant declarations, the Applicants have alleged conclusions, not facts as is required under 37 C.F.R § 1.131.

The declaration alleges that the claimed invention was conceived in May 2002, reduced to practice in September 2002 and went into testing in October 2002.

A proper declaration is required to allege FACTS, which are fully supported by evidence.

The evidence submitted in support of the Applicants' declarations includes the following exhibits: **Exhibit A**, which is a copy of the original proposal dated 30 May 2002; **Exhibit B**, which is a photograph of a planning board showing the details of the implementation of the invention; **Exhibit C**, which is a screen capture from the development archive origination date and change history for the main web-page of eth software; **Exhibit D**, which is a printout of tables from the database repository; **Exhibit E**, which is a file directory listing showing the ZIP file directory listing showing the ZIP

file; **Exhibit F**, which is a listing of users for a system; and **Exhibit G**, which is various screenshots of the system.

Exhibit A provides the evidence required to support the alleged fact that the claimed invention was conceived on 30 May 2002.

In regards to the allegations that the claimed invention was reduced to practice when a first working version was produced in September 2002 and went into testing in October 2002, a conclusion has yet to be drawn based upon the submitted evidence.

One fact that could be alleged based upon **Exhibit B** is that a photograph of the planning board was taken on 2 August 2002. This FACT would be fully supported by the document, since the screenshot shows the date the picture was taken.

One fact that could be alleged based upon **Exhibit C** is dates when modifications to the software occurred.

One fact that could be alleged based upon **Exhibit D** is that there are several tables with entered data.

One fact that could be alleged based upon **Exhibit E** is that a ZIP file was created.

One fact that could be alleged based upon **Exhibit F** is that users were user IDs for the system.

One fact that could be alleged based upon **Exhibit G** is that 4 files exist.

The evidence, however, by itself fails to support the conclusion alleged in the Applicants' declarations that the claimed invention was reduced to practice when a first

working version was produced in September 2002 and went into testing in October 2002.

Nevertheless, in order to advance prosecution of the application, the examiner will proceed to consider the remaining merits of the declaration and supporting evidence that has been submitted.

Conception

9. From MPEP § 715.07 (III):

The affidavit or declaration must state FACTS and produce such documentary evidence and exhibits in support thereof as are available to show conception and completion of invention in this country or in a NAFTA or WTO member country (MPEP § 715.07(c)), at least the conception being at a date prior to the effective date of the reference. Where there has not been reduction to practice prior to the date of the reference, the applicant or patent owner must also show diligence in the completion of his or her invention from a time just prior to the date of the reference continuously up to the date of an actual reduction to practice or up to the date of filing his or her application (filing constitutes a constructive reduction to practice, 37 CFR § 1.131). As discussed above, 37 CFR § 1.131(b) provides three ways in which an applicant can establish prior invention of the claimed subject matter. The showing of facts must be sufficient to show:

(A) reduction to practice of the invention prior to the effective date of the reference; or

(B) conception of the invention prior to the effective date of the reference coupled with due diligence from prior to the reference date to a subsequent (actual) reduction to practice; or

(C) conception of the invention prior to the effective date of the reference coupled with due diligence from prior to the reference

date to the filing date of the application (constructive reduction to practice).

Conception is the mental part of the inventive act, but it must be capable of proof, as by drawings, complete disclosure to another person, etc. In *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897), it was established that conception is more than a mere vague idea of how to solve a problem; the means themselves and their interaction must be comprehended also.

10. From MPEP § 2138.04[R-1]:

Conception has been defined as "the complete performance of the mental part of the inventive act" and it is "the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention as it is thereafter to be applied in practice...." *Townsend v. Smith*, 36 F.2d 292, 295, 4 USPQ 269, 271 (CCPA 1930). "[C]onception is established when the invention is made sufficiently clear to enable one skilled in the art to reduce it to practice without the exercise of extensive experimentation or the exercise of inventive skill." *Hiatt v. Ziegler*, 179 USPQ 757, 763 (Bd. Pat. Inter. 1973). Conception has also been defined as a disclosure of an invention which enables one skilled in the art to reduce the invention to a practical form without "exercise of the inventive faculty." *Gunter v. Stream*, 573 F.2d 77, 197 USPQ 482 (CCPA 1978). See also *Coleman v. Dines*, 754 F.2d 353, 224 USPQ 857 (Fed. Cir. 1985) (It is settled that in establishing conception a party must show possession of every feature recited in the count, and that every limitation of the count must have been known to the inventor at the time of the alleged conception. Conception must be proved by corroborating evidence.)

11. In the case of the instant affidavit, the statements of the declaration and the submittal of corresponding **Exhibit A** meet the requirements to show conception of the invention.

Diligence

12. From MPEP § 715.07(a):

Where conception occurs prior to the date of the reference, but reduction to practice is afterward, it is not enough merely to allege that applicant or patent owner had been diligent. *Ex parte Hunter*, 1889 C.D. 218, 49 O.G. 733 (Comm'r Pat. 1889). Rather, applicant must show evidence of facts establishing diligence.

What is meant by diligence is brought out in *Christie v. Seybold*, 1893 C.D. 515, 64 O.G. 1650 (6th Cir. 1893). In patent law, an inventor is either diligent at a given time or he is not diligent; there are no degrees of diligence. An applicant may be diligent within the meaning of the patent law when he or she is doing nothing, if his or her lack of activity is excused. Note, however, that the record must set forth an explanation or excuse for the inactivity; the USPTO or courts will not speculate on possible explanations for delay or inactivity. See *In re Nelson*, 420 F.2d 1079, 164 USPQ 458 (CCPA 1970). Diligence must be judged on the basis of the particular facts in each case. See MPEP § 2138.06 for a detailed discussion of the diligence requirement for proving prior invention.

Under 37 CFR 1.131, the critical period in which diligence must be shown begins just prior to the effective date of the reference or activity and ends with the date of a reduction to practice, either actual or constructive (i.e., filing a United States patent application). Note, therefore, that only diligence before reduction to practice is a material consideration. The "lapse of time between the completion or reduction to practice of an invention

and the filing of an application thereon" is not relevant to an affidavit or declaration under 37 CFR 1.131. See *Ex parte Merz*, 75 USPQ 296 (Bd. App. 1947).

13. In the case of the instant affidavit, since the Applicant alleges an actual reduction to practice prior to the date of the applied reference, diligence is not an issue.

Reduction to Practice

14. Regarding reduction to practice, MPEP § 715.07 states:

In general, proof of actual reduction to practice requires a showing that the apparatus actually existed and worked for its intended purpose.

15. From MPEP § 2138.05:

Reduction to practice may be an actual reduction or a constructive reduction to practice which occurs when a patent application on the claimed invention is filed. The filing of a patent application serves as conception and constructive reduction to practice of the subject matter described in the application. Thus the inventor need not provide evidence of either conception or actual reduction to practice when relying on the content of the patent application. *Hyatt v. Boone*, 146 F.3d 1348, 1352, 47 USPQ2d 1128, 1130 (Fed. Cir. 1998).

When a party to an interference seeks the benefit of an earlier-filed U.S. patent application, the earlier application must meet the requirements of 35 U.S.C. § 120 and 35 U.S.C. § 112, first paragraph for the subject matter of the count. The earlier application must meet the enablement requirement and must contain a written description of the subject matter of the interference count. *Hyatt v. Boone*, 146 F.3d 1348, 1352, 47 USPQ2d 1128, 1130 (Fed. Cir. 1998). Proof of a constructive reduction to

practice requires sufficient disclosure under the "how to use" and "how to make" requirements of 35 U.S.C. § 112, first paragraph. *Kawai v. Metlesics*, 480 F.2d 880, 886, 178 USPQ 158, 163 (CCPA 1973) (A constructive reduction to practice is not proven unless the specification discloses a practical utility where one would not be obvious. Prior art which disclosed an anticonvulsant compound which differed from the claimed compound only in the absence of a -CH₂- group connecting two functional groups was not sufficient to establish utility of the claimed compound because the compounds were not so closely related that they could be presumed to have the same utility.). The purpose of the written description requirement is "to ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him." *In re Edwards*, 568 F.2d 1349, 1351-52, 196 USPQ 465, 467 (CCPA 1978). The written description must include all of the limitations of the interference count, or the applicant must show that any absent text is necessarily comprehended in the description provided and would have been so understood at the time the patent application was filed. Furthermore, the written description must be sufficient, when the entire specification is considered, such that the "necessary and only reasonable construction" that would be given it by a person skilled in the art is one that clearly supports each positive limitation in the count. *Hyatt v. Boone*, 146 F.3d at 1354-55, 47 USPQ2d at 1130-1132 (Fed. Cir. 1998) (The claim could be read as describing subject matter other than that of the count and thus did not establish that the applicant was in possession of the invention of the count.). See also *Bigham v. Godtfredsen*, 857 F.2d 1415, 1417, 8 USPQ2d 1266, 1268 (Fed. Cir. 1988) ("[t]he generic term halogen comprehends a limited number of species, and ordinarily constitutes a sufficient written description of the common halogen species, except where the halogen species are patentably distinct).

"In an interference proceeding, a party seeking to establish an actual reduction to practice must satisfy a two-prong test: (1) the party constructed an embodiment or performed a process that met every element of the interference count, and (2) the embodiment or

process operated for its intended purpose." *Eaton v. Evans*, 204 F.3d 1094, 1097, 53 USPQ2d 1696, 1698 (Fed. Cir. 2000).

The same evidence sufficient for a constructive reduction to practice may be insufficient to establish an actual reduction to practice, which requires a showing of the invention in a physical or tangible form that shows every element of the count. *Wetmore v. Quick*, 536 F.2d 937, 942, 190 USPQ 223, 227 (CCPA 1976). For an actual reduction to practice, the invention must have been sufficiently tested to demonstrate that it will work for its intended purpose, but it need not be in a commercially satisfactory stage of development.

If a device is so simple, and its purpose and efficacy so obvious, construction alone is sufficient to demonstrate workability. *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 860, 226 USPQ 402, 407 (Fed. Cir. 1985).

For additional cases pertaining to the requirements necessary to establish actual reduction to practice see *DSL Dynamic Sciences, Ltd. v. Union Switch & Signal, Inc.*, 928 F.2d 1122, 1126, 18 USPQ2d 1152, 1155 (Fed. Cir. 1991) ("events occurring after an alleged actual reduction to practice can call into question whether reduction to practice has in fact occurred"); *Corona v. Dovan*, 273 U.S. 692, 1928 C.D. 252 (1928) ("A process is reduced to practice when it is successfully performed. A machine is reduced to practice when it is assembled, adjusted and used. A manufacture [i.e., article of manufacture] is reduced to practice when it is completely manufactured. A composition of matter is reduced to practice when it is completely composed." 1928 C.D. at 262-263 (emphasis added).); *Fitzgerald v. Arbib*, 268 F.2d 763, 765-66, 122 USPQ 530, 531-32 (CCPA 1959) ("the reduction to practice of a three-dimensional design invention requires the production of an article embodying that design" in "other than a mere drawing").

"The nature of testing which is required to establish a reduction to practice depends on the particular facts of each case, especially the nature of the invention." *Gellert v. Wanberg*, 495 F.2d 779, 783, 181 USPQ 648, 652 (CCPA 1974) ("an invention may be tested sufficiently ... where less than all of the conditions of actual

use are duplicated by the tests"); *Wells v. Fremont*, 177 USPQ 22, 24-5 (Bd. Pat. Inter. 1972) ("even where tests are conducted under bench' or laboratory conditions, those conditions must fully duplicate each and every condition of actual use' or if they do not, then the evidence must establish a relationship between the subject matter, the test condition and the intended functional setting of the invention," but it is not required that all the conditions of all actual uses be duplicated, such as rain, snow, mud, dust and submersion in water).

16. In this case, actual reduction to practice and testing are alleged to have occurred prior October 2002. However, actual reduction to practice is not fully supported by **Exhibit B, Exhibit C, Exhibit D, Exhibit E, Exhibit F and Exhibit G** submitted as evidence.

The Applicants have failed to resolve (at least) the following issues which call into question the actual reduction to practice as alleged in the Applicants' declaration:

- * Whether the concepts depicted in the photograph of the planning board in **Exhibit B** were actually implemented in the system.
- * Whether the modifications depicted in **Exhibit C** were during the creation of the system or after the system was reduced to practice.
- * Whether the tables of **Exhibit D** and the file of **Exhibit E** were fully functional.
- * Whether the registered users of the system depicted in **Exhibit F** were successfully able to utilize the system.
- * What form the system was reduced to practice in.

* Whether the testing of the system was successful.

* The conditions under which the testing took place and what the results of the testing were.

17. For the reasons cited above, the declarations filed by the Applicants under 37 C.F.R. § 1.131 fail to establish that the claimed invention was reduced to practice prior to the critical period, and also fails to establish that the claimed invention was conceived prior to the critical period and diligently reduced to practice thereafter. As such, the affidavit is insufficient to establish invention prior to the prior art references relied upon in the rejections of record. The rejections are maintained by the examiner.

Specification

18. Claim 1 is objected to because of the following informalities: The Specification fails to provide support for the term "encoded computer-readable medium." Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. Claims 1-4 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2004/0117397 to Rappold, III (hereafter Rappold) in view of US PGPub 2005/0131861 to Arritt et al (hereafter Arritt) in view of the

dissertation titled “Pulsed DC Reactive Magnetron Sputtering of Aluminum Nitride Thin Films” by Jung Won Cho (hereafter Cho).

Referring to claim 1, Rappold discloses an encoded computer-readable medium comprising a repository comprising a plurality of datasets, each dataset comprising:

a) a metadata database [metadata table 41] in the form of instances [each row – in Fig 4, the instances are labeled 1-5] with associated metadata giving information about the instances, the metadata comprising at least one data element selected from a list comprising name, description [413 – first, middle, last, username, extension], identifying information, data type [415 – in this example, the data type is a string], units, acceptable values or ranges, and default value (see [0041]-[0043] and Fig 4), the metadata database comprising:

- i) metadata [First] on the material (see Fig 4);
- ii) metadata [Username] on the sample (see Fig 4);
- iii) metadata [Extension] on the test (see Fig 4); and
- iv) metadata on data value elements [415 – data type: string] in a test result database [data table 50] (see [0042], lines 7-9 and Fig 4); and

b) the test result database [data table 50] comprising a plurality of instances [each row – in Fig 5, the instances are labeled 121-139] having associated metadata in the metadata database giving information about the instance [item 514 in data table 50 corresponds with column 411 in the metadata table], the instances comprising information about at least one result derived from the test on the sample of the material

[the instances comprise information about an individual] (see [0044]-[0046] and Fig 5), each instance comprising:

i) at least one data element identifying at least one of material, the sample or the test [item 512 – entity ID] (see [0045], lines 8-9); and

wherein the metadata in the metadata database [metadata table 11 or 41] define the instances in the metadata database and the instances of test result information in the test result database [data table 10 or 50] (see [0029]), and

wherein an instance from the test result database [data table 10 or 50], combined with its associated metadata from the metadata database [metadata table 11 or 41] describes the test result derived from the test on the sample of the material [describes an individual] (see [0029] and [0032]).

However, while Rappold discloses a repository of data including a metadata table with associated metadata and a data table containing the actual data values, Rappold fails to explicitly disclose a repository of material property data, wherein the metadata in the metadata table is on the material, sample and test and wherein the data table is a test result table comprising information about at least one result derived from the test on the sample of the material. Furthermore, while Rappold discloses at least one data value element, which is a string, Rappold fails to explicitly disclose at least one data value element selected from a list comprising a single data point, an equation, a graph, a data array, and a picture. Arritt discloses a repository of material property data comprising a plurality of materials property datasets stored in a computer memory, each dataset being associated with a sample of a material and a test on the sample of the

material [tracking/monitoring of samples through multiple testing areas] (see [0022]),
each dataset comprising:

- i) metadata on the material [material code] (see [0025], lines 1-3);
 - ii) metadata on the sample [sample identity] (see [0024], lines 12-19);
 - iii) metadata on the test [operator who performed the test] (see [0034], lines 3-6
and [0037], lines 1-9);
- b) the test result database [the portion of the database dealing testing the
sample] comprising a plurality of instances having associated metadata in the metadata
database giving information about the instance [the database is populated] (see Fig 5,
item 93), the instances comprising information about at least one result derived from the
test on the sample of the material [data measured by the instrumentation] (see [0037],
lines 1-3), each instance comprising:
- i) at least one data element identifying at least one of material, the sample
or the test [the operator who operated the instrument for testing the sample] (see
[0034], lines 3-6 and [0037], lines 1-9) in order to extend the capability of an extensible
database, which allows dynamic changes to be made to a relational database to a
repository of material property data.

It would be obvious to one of ordinary skill in the art to enter the metadata on the
material, sample and test disclosed by Arritt into the metadata table of Rappold and to
enter data collected when testing the sample as disclosed by Arritt into the data table of
Rappold. One would have been motivated to do so in order to extend the capability of

an extensible database, which allows dynamic changes to be made to a relational database to a repository of material property data.

However, the combination of Rappold and Arritt (hereafter Rappold/Arritt) fails to explicitly disclose the further limitation of each instance comprising at least one data value element selected from a list comprising a single data point, an equation, a graph, a data array and a picture. Cho discloses the setup and execution of an experiment on a sample of a material in which the information is stored in the form of instances with associated metadata (see page 36, Table 1-2 – the instances are represented by the type of Crystal and the measurement values and the metadata are Crystal and the units of measurement), including the further limitation of each instance comprising at least one data value element selected from a list comprising a single data point, an equation, a graph, a data array and a picture (see page 153, Table 5.3 – the results of ohmic heating for 10 mT Ar plasma, 0.25 A is 10.8 which is considered to represent a single data point) in order to extend the capability of an extensible database, which allows dynamic changes to be made to a relational database to data collected in a laboratory setting.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enter the data collected by Cho and the associated metadata respectively into the results table and metadata table of Rappold/Arritt. One would have been motivated to do so in order to extend the capability of an extensible database, which allows dynamic changes to be made to a relational database to data collected in

a laboratory setting, which generally incorporates data points, graphs, equations, arrays and pictures.

Referring to claim 2, the combination of Rappold/Arritt and Cho (hereafter Rappold/Arritt/Cho) discloses the repository of claim 1, in which the data element of claim 1(a)(i) on the material comprises at least one data element selected from a list comprising material name, material class, one or more material subclasses, material supplier (Arritt: see [0029], line 12), and material composition for composite materials.

Referring to claim 3, Rappold/Arritt/Cho discloses the repository of claim 1, in which the data element of claim 1(a)ii on the sample comprises at least one data element selected from a list comprising a sample identification, a sample description, a sample size, a sample source and a sample type (Arritt: see [0024], lines 12-19 – *sample identification, sample source and sample type*).

Referring to claim 4, Rappold/Arritt/Cho discloses the repository of claim 1, in which the data element 1(a)(iii) on the test comprises at least one data element selected from a list comprising a description of test method, test parameters, and test source information (Arritt: see [0037], lines 1-9 and [0024], lines 4-5 – the operator's name and department affiliation are considered to represent *test source information*; the identity of the instrument is considered to also represent *test source information*).

Referring to claim 12, Rappold/Arritt/Cho discloses the repository of claim 1, in which results that share common defining parameters are grouped to display the

effect of the defining parameters on the result (Cho: see page 151, Table 5-2 – the defining parameters are 10mT of Ar plasma and 28mT of Ar/N₂ mixture).

Referring to claim 13, Rappold/Arritt/Cho discloses the repository of claim 1, further comprising information about users [operator] of the repository (Arritt: see [0027]).

Referring to claim 14, Rappold/Arritt/Cho discloses the repository of claim 13, in the users about whom information is stored in the customer database comprise at least owners, users and providers of material property datasets in the repository (Arritt: see [0027] – tables of the database contain information about the operator).

20. Claims 15-19, 21-26, 28-30, 34-38, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2004/0117397 to Rappold, III in view of US PGPub 2005/0131861 to Arritt et al in view of the dissertation titled “Pulsed DC Reactive Magnetron Sputtering of Aluminum Nitride Thin Films” by Jung Won Cho in view of US PGPub 2003/0069795 to Boyd et al (hereafter Boyd et al).

Referring to claim 15, Rappold discloses a repository comprising a plurality of datasets stored in a computer memory, each dataset comprising:

a) a metadata database [metadata table 41] in the form of instances [each row – in Fig 4, the instances are labeled 1-5] with associated metadata giving information about the instances, the metadata comprising at least one data element selected from a list comprising name, description [413 – first, middle, last, username, extension], identifying information, data type [415 – in this example, the data type is a string], units,

acceptable values or ranges, and default value (see [0041]-[0043] and Fig 4), the database comprising:

- i) metadata [First] on the material (see Fig 4);
 - ii) metadata [Username] on the sample (see Fig 4);
 - iii) metadata [Extension] on the test (see Fig 4);
 - iv) metadata on data value elements [415 – data type: string] in a test result database [data table 50] (see [0042], lines 7-9 and Fig 4); and
- b) the test result database [data table 50] comprising a plurality of instances [each row – in Fig 5, the instances are labeled 121-139] having associated metadata in the metadata database giving information about the instance [item 514 in data table 50 corresponds with column 411 in the metadata table], the instances comprising information about at least one result derived from the test on the sample of the material [the instances comprise information about an individual] (see [0044]-[0046] and Fig 5), each instance comprising:
- i) at least one data element identifying at least one of material, the sample or the test [item 512 – entity ID] (see [0045], lines 8-9); and
- wherein the metadata in the metadata database [metadata table 11 or 41] define the instances in the metadata database and the instances of test result information in the test result database [data table 10 or 50] (see [0029]), and
- wherein an instance from the test result database [data table 10 or 50], combined with its associated metadata from the metadata database [metadata table 11 or 41]

describes the test result derived from the test on the sample of the material [describes an individual] (see [0029] and [0032]).

However, while Rappold discloses a repository of data including a metadata table with associated metadata and a data table containing the actual data values, Rappold fails to explicitly disclose storing material property data in a repository of material property data, wherein the metadata in the metadata table is on the material, sample and test and wherein the data table is a test result table comprising information about at least one result derived from the test on the sample of the material. Furthermore, while Rappold discloses at least one data value element, which is a string, Rappold fails to explicitly disclose at least one data value element selected from a list comprising a single data point, an equation, a graph, a data array, and a picture. Arritt discloses a method of managing material property data, including the further limitations of

a) storing material property data in a repository stored in a computer memory comprising a plurality of materials property datasets (see [0010]), each dataset:

i) being created by a data provider [the operator of the instrumentation] (see [0035]-[0037]);

iii) being associated with a sample of a material and a test on the sample of the material (see [0010] and [0024], lines 12-19); and

iv) comprising:

i) metadata on the material [material code] (see [0025], lines 1-3);

ii) metadata on the sample [sample identity] (see [0024], lines 12-19);

iii) metadata on the test [operator who performed the test] (see [0034], lines 3-6 and [0037], lines 1-9);

b) a test result database [the portion of the database dealing testing the sample] comprising a plurality of instances having associated metadata in the metadata database giving information about the instance [the database is populated] (see Fig 5, item 93), the instances comprising information about at least one result derived from the test on the sample of the material [data measured by the instrumentation] (see [0037], lines 1-3), each instance comprising:

1) at least one data element identifying at least one of material, the sample or the test [the operator who operated the instrument for testing the sample] (see [0034], lines 3-6 and [0037], lines 1-9) in order to extend the capability of an extensible database, which allows dynamic changes to be made to a relational database to a repository of material property data.

It would be obvious to one of ordinary skill in the art to enter the metadata on the material, sample and test disclosed by Arritt into the metadata table of Rappold and to enter data collected when testing the sample as disclosed by Arritt into the data table of Rappold. One would have been motivated to do so in order to extend the capability of an extensible database, which allows dynamic changes to be made to a relational database to a repository of material property data.

However, the combination of Rappold and Arritt (hereafter Rappold/Arritt) fails to explicitly disclose the further limitation of at least one data value element selected from a list comprising a single data point, an equation, a graph, a data array and a picture and a customer database. Cho discloses the setup and execution of an experiment on a sample of a material in which the information is stored in the form of instances with associated metadata (see page 36, Table 1-2 – the instances are represented by the type of Crystal and the measurement values and the metadata are Crystal and the units of measurement), including the further limitation of at least one data value element selected from a list comprising a single data point, an equation, a graph, a data array and a picture (see page 153, Table 5.3 – the results of ohmic heating for 10 mT Ar plasma, 0.25 A is 10.8 which is considered to represent a single data point) in order to extend the capability of an extensible database, which allows dynamic changes to be made to a relational database to data collected in a laboratory setting.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enter the data collected by Cho and the associated metadata respectively into the results table and metadata table of Rappold/Arritt. One would have been motivated to do so in order to extend the capability of an extensible database, which allows dynamic changes to be made to a relational database to data collected in a laboratory setting, which generally incorporates data points, graphs, equations, arrays and pictures.

Furthermore, Rappold/Arritt/Cho fails to explicitly disclose the further limitations of (a) wherein each dataset has at least one owner; of (b), of (c) or (d). Boyd et al teach

a supplier data management system for materials including a database (see abstract).

In particular, Boyd discloses

- a) storing material property data in a repository comprising a plurality of materials property datasets (see [0009] and [0021]), each dataset:
 - ii) having at least one owner (see [0021]-[0023] – the raw material supplier is considered to represent the *data owner*);
- c) a customer database [manufacturers database] (see [0021], lines 5-8), comprising information about users of the repository, the users about whom information is stored in the customer database comprise owners, users and providers of information in the repository (see [0022]);
- b) providing at least one data owner with access to at least one dataset in the repository (see [0022] – the supplier has access to the data on the particular materials which they supply);
- c) providing at least one data user with access to at least one dataset in the repository (see [0009] – the manufacturer is considered to represent the *data user*); and
- d) displaying information from at least one dataset stored in step (a) and accessed by the user in step (c) on a display [Web page display] (see [0046]) in order to decrease the difficulties of tracking the components of the materials.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use repository of Rappold/Arritt/Cho as a subcomponent to Boyd et al's method of managing supplier data. One would have been motivated to do so in

order to decrease the difficulties of tracking the components of the materials (Arritt et al: see [0005]-[0007]).

Referring to claim 16, the combination of Rappold/Arritt/Cho and Boyd (hereafter Rappold/Arritt/Cho/Boyd) teaches the method of claim 15, in which the materials property datasets are created by the data provider by the steps of:

specifying generic information about the material including at least one of a class, subclass, terms that are commonly associated with the material, notes about the material (Boyd: see [0022] and [0024] – raw material properties, batch information, information about shipping, material ID), generic physical attributes, component materials of the material and their relationship within the material;

performing preliminary validation checks as to whether the information for the material already exists (Boyd: see [0024] – each raw material consists of one code which allows for a validation check to see if information has previously entered);

perform preliminary validation checks regarding structure of the data (Boyd: see [0024], lines 9-13);

when the dataset passes the checks, entering the dataset into the repository (Boyd: see [0024]).

Referring to claim 17, Rappold/Arritt/Cho/Boyd teaches the method of claim 16, in which the data provider specifies the dataset by submitting datasets, each of which represent the results of measurements (Boyd et al: see [0021], lines 5-16).

Referring to claim 18, Rappold/Arritt/Cho/Boyd teaches the method of claim 17, in which the datasets are submitted interactively using a form over a computer network (Boyd et al: see [0021], lines 5-12 – a spreadsheet).

Referring to claim 19, Rappold/Arritt/Cho/Boyd teaches the method of claim 17, in which the datasets are submitted from a computer program (Boyd et al: see [0021]; Fig 1, item 26; and Fig 2, item 10).

Referring to claim 21, Rappold/Arritt/Cho/Boyd teaches the method of claim 15, in which the information on the material in at least one dataset further comprises a nomenclature of the material, and the dataset further comprises an identification of a material vendor, the method further comprising the step of providing the material vendor with access to the dataset for maintenance of the nomenclature (Boyd et al: see [0009] – the supplier transmits the raw materials property data to the database of the manufacturer).

Referring to claim 22, Rappold/Arritt/Cho/Boyd teaches the method of claim 21, in which the nomenclature is selected from a list comprising class, sub-class and general physical attributes (Boyd et al: see [0019], lines 7-13).

Referring to claim 23, Rappold/Arritt/Cho/Boyd teaches the method of claim 15, in which the step of providing the data owner with access to at least one dataset in the repository comprises the steps of:

presenting the data owners with a list summarizing the data that they own,

each item in the list possessing sufficient information for the owner to identify the property, the information being at least one of the name of the material, the name of the property, a date of measurement, identification of a specimen sample as obtained from the data provider and an identification of the test as obtained from the data provider (Boyd et al: see [0022], lines 17-19); and

presenting the owner is with a hyperlink which would lead to the display of an overview and details of all results of the test (Boyd et al: see [0022], lines 12-15 – the user selects the material type from the menu).

Referring to claim 24, Rappold/Arritt/Cho/Boyd teaches the method of claim 23, further comprising the step of allowing the owner to narrow down the list to data which represent a same test or property data for a same sample (Boyd et al: see [0023] – selecting which specification to use when there is more than one is considered to represent narrowing down the data by property data for the same sample).

Referring to claim 25, Rappold/Arritt/Cho/Boyd teaches the method of claim 15, in which the step of providing the data user with access to at least one dataset in the repository comprises the steps of:

allowing the user to indicate any requirements on class, subclasses or suppliers of material (Arritt: see [0027]);

allowing the user to indicate properties sought (Arritt: see [0027]);

presenting a set of materials with their properties (Arritt: see [0027]);

allowing the user to select at least one material and property from the set (Arritt: see [0027]); and

displaying a summary and details of a set of datasets for the specified material and property (Arritt: see [0039] – a generated report).

Referring to claim 26, Rappold/Arritt/Cho/Boyd discloses the method of claim 15, in which at least some of the datasets in the repository further comprise data representing permitted user access privileges, and the step of providing a user with access to the repository comprises the step of comparing the user's access privileges to the data representing permitted user access privileges, and denying access to a dataset if the user's access privileges are not sufficient to access the dataset (Boyd et al: see [0022] – the user enters their identifying ID and password and then is only shown data in which the ID matches the requirements).

Referring to claim 28, Rappold/Arritt/Cho/Boyd discloses the method of claim 15, in which the step of providing the data user with access to at least one dataset in the repository comprises the steps of:

allowing the user to indicate any requirements on class, subclasses or suppliers of material (Arritt: see [0027]);

allowing the user to indicate restrictions on values of results (Arritt et al: see [0027]);

presenting a set of materials with their properties which conform to the restrictions (Arritt: see [0027]);

allowing the user to select at least one material and property from the set (Arritt et al: see [0027]); and

displaying a summary and details of a set of datasets for the specified

material and property (Arritt: see [0039] – a generated report).

Referring to claim 29, Rappold/Arritt/Cho/Boyd teaches the method of claim 15, in which the step of providing the data user with access comprises the step of providing data in a format which is understandable by a selected computer program or application (Boyd et al: see [0031]).

Referring to claim 30, Rappold/Arritt/Cho/Boyd teaches the method of claim 29, in which the repository further stores information describing the format which is understandable by a selected computer program or application (Boyd et al: see [0031]).

Referring to claim 34, Rappold/Arritt/Cho/Boyd teaches the method of claim 15, in which the data element of claim 15(a)(iv)(a)(1) on the material comprises at least one data element selected from a list comprising material name, material class, one or more material subclasses, material supplier (Arritt: see [0029], line 12), and material composition for composite materials.

Referring to claim 35, Rappold/Arritt/Cho/Boyd teaches the method of claim 15, in which a data life cycle of at least one dataset is controlled by the step of permitting at least one user to activate, inactivate, deprecate and discard the dataset (Arritt: see [0023] and [0027]).

Referring to claim 36, Rappold/Arritt/Cho/Boyd teaches the method of claim 35, further comprising the step of providing any user with a review of any active dataset upon request (Arritt: see [0027]).

Referring to claim 37, Rappold/Arritt/Cho/Boyd teaches the method of claim 15, in which the data element of claim 15(a)(iv)(a)(2) on the sample comprises at least one

data element selected from a list comprising a sample identification, a sample description, a sample size, a sample source and a sample type (Arritt: see [0024], lines 12-19 – *sample identification, sample source and sample type*).

Referring to claim 38, Rappold/Arritt/Cho/Boyd teaches the method of claim 15, in which the data element of claim 15(a)(iv)(a)(3) on the test comprises at least one data element selected from a list comprising a description of test method, a standards body specifying the test, test parameters, and test source information (Arritt: see [0037], lines 1-9 and [0024], lines 4-5 – the operator's name and department affiliation are considered to represent *test source information*; the identity of the instrument is considered to also represent *test source information*).

Referring to claim 47, Rappold/Arritt/Cho/Boyd teaches the method of claim 15, further comprising the step of providing at least one data owner with means to monitor usage of at least one dataset (Boyd et al: see [0022] – the network and the interface provides the means).

21. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2004/0117397 to Rappold, III in view of US PGPub 2005/0131861 to Arritt et al in view of the dissertation titled "Pulsed DC Reactive Magnetron Sputtering of Aluminum Nitride Thin Films" by Jung Won Cho in view of US PGPub 2003/0069795 to Boyd et al as applied to claim 19 above, and further in view of US PGPub 2004/0243580 to Markki et al (hereafter Markki et al).

Referring to claim 20, Rappold/Arritt/Cho/Boyd teaches a method in which documents are submitted by the computer program using SOAP protocol. However, Arritt/Cho/Boyd fails to explicitly teach the further limitation in which the documents are submitted by the computer program using SOAP protocol. Markki et al teach a method of submitting documents, including the further limitation. In particular, Markki et al teach a method similar to that of claim 19, in which the documents are submitted by the computer program using SOAP protocol (Markki et al: see [0169]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Markki et al's method of submitting documents using SOAP protocol with Rappold/Arritt/Cho/Boyd's method for submitting documents as a precautionary measure. One would have been motivated to do so in order to reduce the amount of required overhead and additional software (Arritt et al: see [0007]).

22. Claims 27 and 31-33 rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2004/0117397 to Rappold, III in view of US PGPub 2005/0131861 to Arritt et al in view of the dissertation titled "Pulsed DC Reactive Magnetron Sputtering of Aluminum Nitride Thin Films" by Jung Won Cho in view of US PGPub 2003/0069795 to Boyd et al as applied respectively to claims 26 and 15 above, and further in view of US Patent No 6,484,173 to O'Hare et al (hereafter O'Hare et al).

Referring to claim 27, Rappold/Arritt/Cho/Boyd teach a method in which at least some of the datasets in the repository further comprise data representing permitted user

access privileges, and the step of providing a user with access to the repository comprises the step of comparing the user's access privileges to the data representing permitted user access privileges, and denying access to a dataset if the user's access privileges are not sufficient to access the dataset. However, Rappold/Arritt/Cho/Boyd fails to explicitly teach the further limitations of presenting the user with a form to request access to the dataset, accepting the form from the user, notifying the data owner of the request for access, along with basic identification and contact information about the requesting user, allowing the data owner to accept or reject the request and if the data owner accepts the request, updating the data access privileges in the dataset to permit access by the user. O'Hare et al teaches a method for controlling access to a storage device (see abstract). In particular, O'Hare et al teach a method similar to that of claim 26, further comprising the steps, after the step of denying access, of:

- presenting the user with a form to request access to the dataset (see column 3, lines 23-47 – the screen to enter user ID and password is considered to represent the form);

- accepting the form from the user (see column 3, lines 23-47);

- notifying the data owner of the request for access, along with basic identification and contact information about the requesting user;

- allowing the data owner to accept or reject the request (see column 2, lines 50-67 and column 3, lines 23-47);

if the data owner accepts the request, updating the data access privileges in the dataset to permit access by the user (see column 2, lines 31-35 and column 3, lines 23-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use O'Hare et al's method of controlling access to a storage device with the management system of Rappold/Arritt/Cho/Boyd. One would have been motivated to do so in order to limit user access and increase the security of the information stored in the database (Boyd et al: see [0008], lines 11-17).

Referring to claim 31, Rappold/Arritt/Cho/Boyd teaches a method for managing material property data. However, Rappold/Arritt/Cho/Boyd fails to explicitly teach the further limitation of in which there are a plurality of data users and a plurality of domains, and at least one domain administrator associated with at least one domain, and the method further comprises the steps of: the domain administrator assigning at least some of the plurality of users to at least one domain, the domain administrator setting policies for access of at least one dataset by the users assigned to the domain. O'Hare et al teach a method for controlling access to a storage device (see abstract). In particular, O'Hare et al disclose a method similar to that of claim 15, in which there are a plurality of data users and a plurality of domains, and at least one domain administrator associated with at least one domain, and the method further comprises the steps of:

the domain administrator assigning at least some of the plurality of users to at least one domain (O'Hare et al: see column 10, lines 41-56),

the domain administrator setting policies for access of at least one dataset by the users assigned to the domain (O'Hare et al: see column 10, lines 41-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use O'Hare et al's method of controlling access to a storage device with the management system of Arritt/Cho/Boyd. One would have been motivated to do so in order to limit user access and increase the security of the information stored in the database (Boyd et al: see [0008], lines 11-17).

Referring to claim 32, the combination Rappold/Arritt/Cho/Boyd and O'Hare et al (hereafter Rappold/Arritt/Cho/Boyd/O'Hare) teaches the method of claim 31, in which the domains are a company or a division of the company (O'Hare et al: see column 10, lines 41-56 – a workgroup is considered to represent a division of a company).

Referring to claim 33, Rappold/Arritt/Cho/Boyd/O'Hare teaches the method of claim 31, further comprising the step of permitting the domain administrator to assign at least one domain to at least one other domain (O'Hare et al: see column 10, lines 41-56).

Response to Arguments

23. Applicant's arguments filed in regards to the Affidavit have been fully considered but they are not persuasive. For the reasons stated above, the affidavit fails to overcome the stated references. Therefore, the prior art rejections have been maintained.

24. Applicant's arguments filed in regards to the prior art rejections have been fully considered but they are not persuasive.

Referring to Applicants' arguments on pages 13-14 of the Remarks, the Applicants argue the following: "Neither Rappold's application nor the other cited references discloses or teaches the novel "metadata on metadata" feature of this invention claimed in independent claims 1 and 15."

The examiner respectfully disagrees. Rappold discloses a metadata table. Rappold states in [0047], lines 8-14 the following: "Likewise, the metadata table can also hold a variety of information, which can include the following: metadata ID, entity ID, attribute ID, entity name, attribute name, attribute type, Default value, required indicator, minimum and maximum values, format, permitted access, primary key sequence, foreign key sequence, and status, among other information." Therefore, these items of data are metadata [data about the data] that can be included for the instances of data entered into the metadata table. Therefore, the Rappold invention does not have to be reinvented in order to include the concept of metadata on metadata.

25. The rejections of dependent claims 2-4, 12-14, 16-38 and 47 are maintained for the reasons stated above in regards to independent claims 1 and 15.

Conclusion

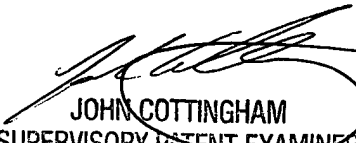
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Lovel whose telephone number is (571) 272-2750. The examiner can normally be reached on 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kimberly Lovel
Examiner
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19 January 2008
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